

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International publication date

21 July 2005 (21.07.2005)

PCT

(10) International publication number

WO 2005/066565 A1

(51) International patent classification⁷:
F28F 9/02

F28D 1/053,

(74) Joint Representative: **BEHR GMBH & CO. KG**;
Intellectual Property, G-IP, Mauserstrasse 3, 70469
Stuttgart (DE).

(21) International application number: PCT/EP2004/013830

(22) International filing date: 6 December 2004 (06.12.2004)

(25) Language of filing: German

(26) Language of publication: German

(30) Data relating to the priority:
10 2004 001 786.7 12 January 2004 (12.01.2004) DE

(71) Applicant (for all designated States except US): **BEHR GMBH & CO. KG** [DE/DE]; Mauserstrasse 3, 70469 Stuttgart (DE).

(72) Inventors; and

(75) Inventors/Applicants (US only): **MOLT, Kurt** [DE/DE]; Ruländerweg 23, 74321 Bietigheim-Bissingen (DE). **WÖLK, Gerrit** [DE/DE]; Olgastrasse 126, 70180 Stuttgart (DE).

(81) Designated states (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

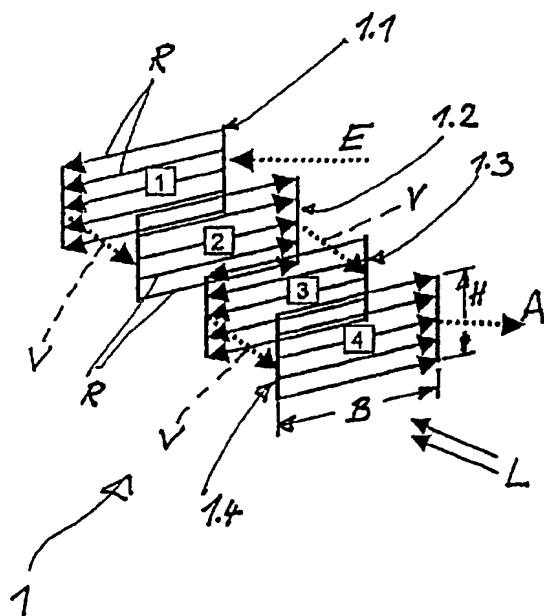
(84) Designated states (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian Patent, (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European Patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI Patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[continued on next page]

As printed

(54) Title: HEAT EXCHANGER, IN PARTICULAR FOR AN OVER CRITICAL COOLING CIRCUIT

(54) Bezeichnung: WÄRMEDÜBERTRAGER, INSBESONDERE FÜR ÜBERKRITISCHEN KÄLTEKREISLAUF



(57) Abstract: The invention relates to a heat exchanger (1), in particular for an over critical cooling circuit. Said heat exchanger comprises a block consisting of tubes (R) and ribs. A gaseous medium, in particular air, can flow over said ribs. A second medium, in particular a coolant, can flow through the tubes (R), which are arranged in at least four rows (1.1, 1.2, 1.3, 1.4), in particular in a cross-counter flow in relation to the gaseous medium.

(57) Zusammenfassung: Die Erfindung betrifft einen Wärmedübetrager (1), insbesondere für einen überkritischen Kältekreislauf, mit einem aus Röhren (R) und Rippen bestehenden Block, wobei die Rippen von einem gasförmigen Medium, insbesondere Luft überströmbar und die in mindestens vier Reihen (1.1, 1.2, 1.3, 1.4) angeordneten Röhre (R) insbesondere im Kreuzgegenstrom zum gasförmigen Medium von einem zweiten Medium, insbesondere einem Kältemittel durchströmbar sind.

WO 2005/066565 A1

Declaration under Rule 4.17:

- of inventorship (Rule 4.17(iv)) for the following designation US

For an explanation of the two-letter codes and the other abbreviations, reference is made to the explanations ("Guidance Notes on Codes and Abbreviations") at the beginning of each regular edition of the PCT Gazette.

Published:

- With International Search Report.